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I, Harald Deinhammer, am the inventor of the US patent application US20060254444 A1 and, since May 2007, work in the Banknotes Research and Development Section of the European Central Bank.

I have studied the contents of DE4430430C1. According to my knowledge of printing technologies I would, for the cylinders or plates for the printing technologies described therein, use a brass or copper alloy with a maximum hardness of 50-90 Vickers units.
Brass plates with a Vickers Hardness of 140 or beyond I would not recommend and are – according to my best knowledge – not used in the industry as they are firstly difficult to produce by common rolling techniques, as they require special hardening heat-treatment and are, secondly, significantly harder to engrave (either by laser or mechanical structuring) and subsequently grind.

For the printing technologies described in the DE4430430C1 such an exceptionally high Vickers hardness is not required, as the pressure exerted on the plates/cylinders is in the range of typically kilograms or a few tons at maximum.

In Intaglio printing, the printing technology specifically targeted in the US20060254444 A1, a pressure of about 60 tons has to be applied to the printing cylinder to achieve ink transfer to - and embossing of - the substrate. Plates with a standard hardness of 90HV maximum would immediately deform and fail to print.

The invention disclosed in DE4430430C1 of coating the engraved printing plate with a thin surface coating of up to 850 HV will therefore, considering the above, not improve the durability of the printing plate or cylinder in Intaglio printing and is in my professional opinion not applicable to Intaglio printing.

Harald Deinhammer